AMENDMENTS TO THE CLAIMS

Please add new Claims 58 and 59 as follows.

LISTING OF CLAIMS

1.   (Previously Presented) A method of tracking earliest pilot phase offsets for geo-location determination comprising:

determining, with a mobile station, search window limitations for one or more sectors due to cell coverage area and due to mobile station dynamics; and

searching for earliest pilot phase offsets of the sectors using the determined search windows.

2.   (Previously Presented) The method of claim 1, further comprising:

determining search window offsets for each of the one or more sectors based on the relative phase offset between pilots of sectors.

3.   (Previously Presented) The method of claim 1, wherein determining search window limitations further comprises determining an earliest point in time of the window as earlier than the latest of the line-of-sight or earliest path times from a set of sectors by a cell size based factor or speed based factor.

4.   (Previously Presented) The method of claim 1, wherein determining search window limitations further comprises determining a latest point in time of the window as later than the earliest of the line-of-sight or earliest path times from a set of sectors by a cell size based factor or speed based factor.

5. (Previously Presented) The method of claim 1, further comprising setting the search window size asymmetrically from an early and a late side.

6. (Previously Presented) The method of claim 1, further comprising setting an early side of the search window based on cell size and speed of a mobile station.

7. (Previously Presented) The method of claim 1, further comprising setting a later side of the search window based on a speed of a mobile station.

8. (Previously Presented) The method of claim 1, further comprising transmitting cell size based limitations to a mobile station.

9. (Previously Presented) The method of claim 8, further comprising embedding the cell size based limitations in overheads or other messages.

10. (Previously Presented) The method of claim 1, further comprising using results of phase measurements in position location algorithms.

11.-20. (Cancelled)

21. (Original) A wireless communication system which tracks earliest pilot phase offsets for geo-location determination comprising:

one or more base stations, each of the one or more base stations serving a cell divided into one or more sectors; and

a mobile station which determines search window limitations for the one or more sectors due to the cell coverage area and due to mobile station dynamics, wherein the mobile station searches for the earliest pilot phase offsets of the one or more sectors using the determined search windows.

22. (Previously Presented) The wireless communication system of claim 21, wherein the mobile station determines search window offsets for each of the one or more sectors based on the relative phase offset between pilots of sectors.

23. (Previously Presented) The wireless communication system of claim 22, wherein the mobile station further determines search window limitations by determining an earliest point in time of the window as earlier than the latest of the line-of-sight or earliest path times from a set of sectors by a cell size based factor or speed based factor.

24. (Previously Presented) The wireless communication system of claim 22, wherein the mobile station further determines search window limitations by determining a latest point in time of the window as later than the earliest of the line-of-sight or earliest path times from a set of sectors by a cell size based factor or speed based factor.

25.   (Previously Presented) The wireless communication system of claim 21, wherein the search window size is set asymmetrically from an early and a late side.

26.   (Previously Presented) The wireless communication system of claim 21, wherein an early side of the search window is set based on cell size and speed of the mobile station.

27.   (Previously Presented) The wireless communication system of claim 21, wherein a later side of the search window is set based on a speed of the mobile station.

28.   (Previously Presented) The wireless communication system of claim 21, wherein the mobile station receives cell size based limitations.

29.   (Previously Presented) The wireless communication system of claim 28, wherein the cell size based limitations are embedded in overheads or other messages.

30.   (Previously Presented) The wireless communication system of claim 21, wherein the results of phase measurements are input to position location algorithms.

31.-51. (Cancelled)

52.   (Previously Presented) The method of claim 1, wherein timings of the pilot phase offsets are used for geo-location and the pilot phase offsets are not used for

demodulation unless the pilot phase offsets are also suitable for communications purposes.

53.   (Previously Presented) The method of claim 1, wherein the mobile station dynamics correspond to a maximum velocity in a direction away from a base station.

54.   (Previously Presented) The method of claim 1, wherein the cell coverage area corresponds to a maximum signal range of a base station.

55.   (Previously Presented) The wireless communication system of claim 21, wherein timings of the pilot phase offsets are used for geo-location and the pilot phase offsets are not used for demodulation unless the pilot phase offsets are also suitable for communications purposes.

56.   (Previously Presented) The wireless communication system of claim 21, wherein the mobile station dynamics correspond to a maximum velocity in a direction away from one of the base stations.

57.   (Previously Presented) The wireless communication system of claim 21, wherein the cell coverage area corresponds to a maximum signal range of one of the base stations.

58.   (New) The wireless communication system of claim 1, wherein the mobile station dynamics include at least one of a speed of the mobile station, motion of the mobile station and a change in position of the mobile station.

59.   (New) The wireless communication system of claim 21, wherein the mobile station dynamics include at least one of a speed of the mobile station, motion of the mobile station and a change in position of the mobile station.